

International Space Station (ISS) crew liquid human waste is treated with chromic and sulfuric acids to maintain stability prior to processing to recover water. This pre-treated urine (PTU) and its processed by-product, brine, are highly toxic fluids that require special containment for on-orbit stowage. The temporary urine and brine stowage system (TUBSS) is an assembly used to store and transfer pre-treated urine (PTU) and brine for processing or disposal at a later date. This paper describes the development of the TUBSS, including design for two-fault tolerance and materials selection to maintain a soft, collapsible container. In addition, this paper will provide results of testing as well as lessons learned from the project, culminating in the successful launch of the hardware.